

Letter from the Editor



Professor Mats Karlsson is the BCPT Nordic Prize winner in Basic & Clinical Pharmacology & Toxicology for 2019

Professor Mats Karlsson is a world-renowned scientist in the field of clinical pharmacology and pharmacometrics, and he has made extraordinary contributions with a strong commitment to develop the field. In the following, some of his contributions will be highlighted:

Mats Karlsson was born in Sweden in 1959. He graduated as a pharmacist from Uppsala University and earned his PhD in pharmacokinetics in 1989 from Uppsala University with the thesis: "Novel methods for estimation of ligand binding kinetics and drug absorption". Subsequently, he had several post-doc positions, the last of which took place at the University of California San Francisco from 1992 to 1994. This resulted in a long-lasting collaboration with professor S.L. Beal and professor L.B. Sheiner and in several key publications.

In 1994, he started the Pharmacometrics Research Group (PMG) at Uppsala University, and he was appointed the first (worldwide) professorship in Pharmacometrics in 2001. The PMG has now grown to the largest academic research group in this area, globally comprising approximately 45 members (7 faculty, 2 system developers, 7 post-docs, >20 PhD students, visiting scientists and several part-time employees).

By providing an impressively generous, open and dynamic atmosphere in this cross-disciplinary area, researchers with different backgrounds have been attracted both with respect to competence (pharmacy, medicine, engineering, statistics and computational sciences) as well as origin (past and present researchers represent >20 nations from all parts of the world). While developing his own research, he has allowed younger researchers to grow and become independent scientists in their own right, and so far, two of his PhD students have become full professors and two have become associate professors.

Mats Karlsson has outstanding achievements in the education of pharmacometricians. He has enthusiastically supervised 27 students to PhD degree as main supervisor and 29 students as co-supervisor. In addition, he has mentored more than 40 post-docs. The students and post-docs are now in positions at academic institutions, the pharmaceutical industry, contract research organisations and at drug regulatory authorities worldwide. He has developed several courses for PhD students and professionals, including the popular courses on covariate model building and PKPD modelling in NONMEM. He has also established the annual Uppsala Pharmacometric Summer School (UPSS), a free two-week summer course attracting PhD students from around the world.

Mats Karlsson has successfully kept a uniquely broad research profile in both development of methodology for analysis of clinical data using non-linear mixed-effects modelling and applied modelling in several therapeutic areas. He has published in more than 300 peer-reviewed research articles, has an h-index of 48 and the top three publications are cited more than 300 times. Methodology improvements include new methods for covariate model building in non-linear mixed-effects modelling, efficient clinical trial design and model diagnostics. The developed methodology is widely available via free and open-source software. He has developed several platform models, now commonly used in drug development of drugs in diabetes, oncology, TB and inflammatory disease (e.g. RA and MS). He has also developed approaches for analysis of categorical type data, enabling efficient analysis of adverse event records.

Mats Karlsson is partner of several European research consortia (PreDiCT-TB, Orbito, IDEAL and U-PGx) and was the academic principle investigator of the European research consortium DDMoRe, within which modelling standards, a modelling environment and a library of drug/disease models for the pharmacometrics community were developed. He is also on several editorial boards of scientific journals including being the European Editor of Journal of Pharmacokinetics and Pharmacodynamics.

Kim Brøsen

Editor-In-Chief

Basic & Clinical Pharmacology & Toxicology (BCPT)

18 September 2019

About BCPT:

Basic & Clinical Pharmacology & Toxicology is a Nordic journal, which was founded in Copenhagen in 1945. The journal publishes original scientific research in all fields of toxicology and basic and clinical pharmacology, including experimental animal pharmacology and toxicology and molecular (genetic), biochemical and cellular pharmacology and toxicology. Basic & Clinical Pharmacology & Toxicology is the journal of the Nordic Association for the Publication of BCPT (former the Nordic Pharmacological Society).